

REMARKS

This Amendment is filed in response to the Office Action dated February 22, 2005. Claims 3-5, 8, 9, 46, and 49-54 are pending in the Application. Claims 55-60 were withdrawn from consideration by the present Office Action. No amendments to the claims are made by the Applicants in this Response.

I. THE CLAIMS ARE PATENTABLE OVER THE PRIOR ART

A. Paragraph 3 Rejection of Claims 3-5, 8, 9, 46, and 49-54

Claims 3-5, 8, 9, 46, and 49-54 stand rejected under 35 U.S.C. 103(a) as being assertedly unpatentable over Taylor et al, PCT Application No. WO 98/15418 (Taylor Application) in view of Drinkwater et al., PCT Application No. WO 94/27254 (Drinkwater Application). The Applicants respectfully traverse this rejection.

1. Claim 46

In the Amendment filed July 21, 2004 ("Amendment after Final"), claim 46 was amended in accordance with the Examiner's suggestion in the Final Office Action dated May 21, 2004. As amended, claim 46 recites a self authenticating article comprising a substrate having encoded, hidden indicia printed thereon, the encoded, hidden indicia comprising a plurality of lines printed with a predetermined line frequency; and a lenticular lens attached to the substrate, the lens being configured for optically decoding encoded, hidden indicia and having a lens frequency corresponding to the line frequency of the encoded, hidden image. Claim 46 further recites that the lens is disposed so that it may be positioned to overlie the encoded, hidden indicia so that it may be viewed through and decoded by the lens.

2. The Taylor Application

The Taylor Application was discussed in detail in the Amendment After Final. Briefly summarized, the Taylor Application discloses self-verifying security documents, such as banknotes, that comprise a flexible sheet formed from a plastic substrate bearing indicia thereon. Taylor Application, Abstract and page 2, lines 22-29. The sheet has a window of transparent plastic material that includes self-verification means for verifying a security device positioned on a second portion of the sheet. Id. Five embodiments using different optical methods and means for self-verification are disclosed: (1) microprinting that requires magnification to be observed

(Taylor Application, page 8, lines 10-26); (2) use of metameretic inks (Taylor Application page 10, line 13 to page 11, line 17); (3) use of multiple polarizing windows to create a predetermined optical effect (Taylor Application, page 11, line 18 to page 13, line 9); (4) superposition of patterns to produce a Moire pattern (Taylor Application, page 13, line 10 to page 14, line 24); and (5) combination of two partial images to form a complete image (Taylor Application, page 15, lines 7-19).

3. The Drinkwater Application

The Drinkwater Application is directed to a security device comprising an array of microimages which, when viewed through a corresponding array of substantially spherical microlenses, generates a magnified image. Drinkwater Application Abstract. The microimage array is a two dimensional array of identical microimages each having a dimension up to about 250 microns. Drinkwater Application, page 2, lines 1-8 and Figures 1A and 1B. The magnified image is produced when the microimage array is viewed through a corresponding array of microlenses having substantially the same pitch as the microimage array. Id.. Each array consists of many lenses or microimage elements, repeating in each direction with a regular pitch. Drinkwater Application, page 3, lines 33-35. When the microlens array is aligned with the corresponding microimage array, each microlens has underneath it a microimage in perfect register so that an observer sees only one magnified image of the micro images. Drinkwater Application, page 5, lines 7-11 and Figures 1C and 1D.

The Drinkwater Application discloses that a method of producing a record medium for use in producing security devices of the type discussed above comprises "imaging" an image on the record medium through a two dimensional array of spherical microlenses, thereby recording a two dimensional array of micro images. Drinkwater Application, page 6, line 34 to page 7, line 5.

4. The Combined Teachings of the Taylor and Drinkwater Applications Do Not Teach, Disclose or Suggest the Features of Claim 46.

(a) The Taylor Application Does Not Disclose or Suggest the Features of Claim 46

As noted in the Office Action, the Taylor Application does not disclose all the elements of claim 46. The Applicants agree with the Examiner that the Taylor Application fails to

disclose the use of a lens having a lens frequency corresponding to the predetermined line frequency of an encoded hidden image. (See Office Action, section 3, third paragraph.)

The Applicants submit, however, that the Taylor Application also fails to disclose a substrate having encoded, hidden indicia printed thereon and a decoding lens for revealing the encoded hidden indicia. The Taylor Application also fails to disclose that such encoded, hidden indicia comprises a plurality of lines printed with a predetermined frequency.

As described throughout the present Application, the hidden indicia of the invention may be printed in an encoded form so that the indicia may only be viewed through the use of a corresponding decoder. See, e.g., Application, page 10, lines 14-22; page 33, lines 15-19. One exemplary method of providing an encoded image is discussed in detail on pages 21-27 of the Application. In this method, the indicia are rasterized according to a set of predetermined parameters including line frequency. The indicia may then be "hidden" by incorporating the encoded image into a source image. Application, page 11, lines 3-23. The encoded image may be decoded using a lens with a corresponding frequency.

The Taylor Application does not disclose a document having encoded, hidden indicia or a means for revealing such encoded, hidden indicia. The nearest embodiment to a document having encoded, hidden indicia that is disclosed in the Taylor Application is the embodiment using metamerik inks in the security device. In this embodiment, certain portions of an image might be revealed only upon viewing through the specially tinted window. There is no disclosure or suggestion, however, that the image be scrambled or encoded so that the optical characteristics of the window serve to reassemble (i.e., decode) the image.

In the Office Action, it was asserted that the Taylor Application discloses a decoding lens for revealing encoded hidden indicia. Office Action, section 3, second paragraph. As backing for this assertion, the Office Action cited Taylor Application, page 15, lines 7-19. The cited passage describes the Taylor embodiment in which a complete image is formed as a composite of two partial images, one of the partial images being printed on a transparent window. The Applicants respectfully submit that this passage is not a disclosure of a lens configured for optically decoding encoded, hidden indicia viewed therethrough. The Applicants also submit that the partial image disclosed in this passage is not an encoded hidden image.

The Applicants therefore submit that the Taylor Application fails to teach, disclose or suggest a self-authenticating article comprising a lens configured for optically decoding encoded, hidden indicia viewed therethrough. Further, the Taylor Application fails to teach, disclose or suggest a lens having a lens frequency corresponding to the line frequency of the encoded, hidden image.

(b) The Drinkwater Application Does Not Cure the Deficiencies of the Taylor Application

The deficiencies of the Taylor Application are not cured by the teachings of the Drinkwater Application. Specifically, the Drinkwater Application does not teach, disclose or suggest a self-authenticating document comprising a lens configured for optically decoding encoded, hidden indicia viewed therethrough. The microimage array of the Drinkwater Application is not an encoded version of an image. It is merely a regularized arrangement of miniature versions of the image, each miniature version being identical. The Drinkwater Application discloses that a corresponding microlens array can be used to produce one or more larger versions of these miniature images. It will be understood by one of ordinary skill in the art, however, that the image can also be viewed simply by magnifying any one of the microimages using any sufficiently powerful magnifier. In other words, the microlens array is not necessary to view the microimage indicia.

This is not true of encoded hidden images. As discussed above, an encoded hidden image may only be viewed through the use of a corresponding decoder.

The Drinkwater Application also fails to disclose that the encoded, hidden indicia comprise a plurality of lines printed with a predetermined line frequency. The Drinkwater Application discloses that the microimages (each of which is a miniature version of the overall image) may be disposed in a regularly spaced two dimensional array. The “pitch” of the array is said to be the same as the pitch of a corresponding microlens.

The Drinkwater disclosure suggests that discrete microimages may be aligned in the rows and columns of a regular array and that their spacing may match the spacing of spherical microlenses in a composite lens. It does not, however, suggest that the microimages comprise or form lines as recited in claim 46.

For at least the above reasons, the Applicants submit that the combined teachings of the Taylor and Drinkwater Applications do not teach, disclose or suggest the features of claim 46.

The Applicants therefore request that the rejection of claim 46 under 35 U.S.C. 103(a) be withdrawn.

5. The Office Action Does Not Point Out Any Motivation to Combine the Teachings of the Cited References

The MPEP states that in a rejection under 35 U.S.C. 103, the examiner should set forth the modification of the applied references necessary to arrive at the claimed subject matter and an explanation as to why one of ordinary skill in the art at the time of the invention would have been motivated to make this modification. MPEP §706.02(j).

In the Office Action, it was stated that it would have been obvious to one of ordinary skill in the art to modify the article of the Taylor Application “with a lenticular lens having a frequency corresponding with the images frequency to decode the image as taught by [the Drinkwater Application] . . .” The Office Action did not provide any explanation as to why one of ordinary skill in the art would have been motivated to use the microlens and microimage arrays of the Drinkwater Application in the security document of the Taylor Application.

Because the Examiner did not identify or explain any basis for a motivation to combine the teachings of the cited references, the Applicants respectfully submit that the rejection of claim 46 under 35 U.S.C. 203(a) is improper and should be withdrawn.

6. Dependent Claims 3-5, 8 and 9

Claims 3-5, 8 and 9 are dependent on claim 46, which has been shown to be patentable over the cited combination of references. The Applicants submit that by virtue of their dependency, claims 3-5, 8 and 9 are also patentable and requests that their rejection under 35 U.S.C. 103(a) be withdrawn.

7. Claims 49-54

Claim 49 recites a self authenticating article comprising a substrate having at least one printable surface portion and a lenticular lens attached to the substrate. The lenticular lens has a lens frequency and is configured for optically decoding encoded indicia. The article also comprises encoded, hidden indicia printed on the printable surface portion of the substrate. The encoded, hidden indicia is formed from a plurality of lines printed with a line frequency that is a multiple of the lens frequency.

For at least the reasons stated above with respect to claim 46, the Applicants submit the combined teachings of the Taylor and Drinkwater Applications do not teach, disclose or suggest the features of claim 49.

In addition, the Applicants note that the Taylor and Drinkwater Applications do not disclose encoded indicia having a line frequency that is a multiple of the lens frequency. As noted above, neither of the cited references discloses encoded hidden indicia that comprise a plurality of lines with a line frequency. The nearest disclosure is that of Drinkwater, which discloses regularly spaced microimages having a predetermined pitch. However, even if, for the sake of argument only, these arrays are considered “lines” with a particular frequency, the Drinkwater Application states that the pitch of the microimage array is the same as that of the microlens array (Drinkwater Application, page 2, lines 1-8; page 7, lines 4, 5; and page 8, lines 6, 7). Thus, the Drinkwater Application does not disclose that the pitch of the microimage array may be a multiple of the microlens array pitch.

For at least the above reasons, the Applicants respectfully request that the rejection under 35 U.S.C. 103(a) of independent claim 49 be withdrawn. The Applicants also request that the rejection of dependent claims 50-54 under 35 U.S.C. 103(a) be withdrawn.

II. CONCLUSION

For at least the reasons set forth above, the Applicants respectfully submit that claims 3-5, 8, 9, 46, and 49-54 are in condition for allowance. The Applicants therefore request that the Application be allowed and passed to issue.

Should the Examiner believe anything further is desirable in order to place the Application in even better condition for allowance, the Examiner is invited to contact the Applicants' undersigned representative.

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Respectfully submitted,



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